



SCIENCE AND EDUCATION

Education, Religion, and Science Come Together at Evolution Event

As a long-time chemistry teacher and chair of her high school Science Department, Bertha Spahr knew of AAAS's broad interest in science and policy. She hadn't realized, though, that its involvement extended to her classroom in Dover, Pennsylvania.

But at a special evolution event organized by AAAS, Spahr realized that the U.S. science and technology communities are rallying to aid teachers like herself in schools nationwide who are subject to mounting pressure by antievolution groups to inject religion into public school science classrooms.

"It was a great encouragement," Spahr said in an interview after the event. "It gave us additional strength to stand up and fight for what we believe to be science.... It gave us even greater courage to go out and do what we can to assist other people."

Spahr was among nearly 500 educators, students, and others who attended a special half-day session, "Evolution on the Front Line," held during the AAAS Annual Meeting in St. Louis. Spahr and seven other educators from Dover and Cobb County, Georgia, received travel awards from the Geological Society of America to participate in the event, where they received a standing ovation for their efforts to preserve the integrity of science education.

The 19 February event featured a remarkable roster of speakers—influential educators, clergy, scientists, and others—who exchanged ideas on building a broad social consensus in support of science education. The audience heard both elegant discourse on the origins of life and practical advice on how to respond when students, parents, or local school officials pressure teachers to avoid evolution or to introduce faith-based doctrine into classes.

Among those who spoke at the event were the Rev. George Coyne, a Jesuit priest and director of the Vatican Observatory; U.S. Representative Russ Carnahan (D-Mo.); Linda Froschauer, president-elect of the National Science Teachers Association; and biologist Kenneth R. Miller, the author of *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution*.



Naturalist Jeff Corwin, the Emmy Award-winning host of *Corwin's Quest* on the Animal Planet cable television channel.

Miller and Spahr were witnesses in the 2005 trial that led a federal judge to strike down the Dover school board's policy of introducing intelligent design in the community's ninth-grade biology classes.

"As a legal strategy, intelligent design is dead," Eugenie Scott, executive director of the National Center for Science Education, told reporters at a news conference before the event. "That doesn't mean intelligent design is dead as a very popular social movement. This is an idea that has got legs ... It will continue to evolve."

"If you want to believe in intelligent design, you absolutely may," said naturalist Jeff Corwin, the Emmy Award-winning host of *Corwin's Quest* on the Animal Planet cable television channel. "But just because you aspire to a particular philosophy does not necessarily give you the right to take that information and integrate it into curriculum."

"I look out and I see all these teachers who have come together at this critical time in our lives.... Make no mistake—what you are doing is important."

Just before the event began, the AAAS Board of Directors issued a new statement expressing deep concern about antievolution efforts in a number of states "that would undermine the teaching of evolution and deprive students of the education they need to be informed and productive citizens in an increasingly technological, global community."

"Evolution on the Front Line" generated extensive coverage by Reuters, the *Chronicle of Higher Education*, and many other news media outlets. The event was moderated by AAAS Board Chair Gilbert S. Omenn, professor of medicine, genetics, and public health at the University of Michigan. It was made possible by the William T. Golden Endowment Fund for Program Innovation, and was planned in collaboration with three dozen prominent science and education organizations, including the National Academy of Sciences, the American Federation of Teachers, the National Education Association, and the Missouri Botanical Garden.

An introductory video, a new guide to teaching evolution from Project 2061 at AAAS, speaker presentations, and other resources are available online at www.aaas.org/evoevent.

BUDGET AND POLICY

AAAS Worries U.S. R&D Cuts Will Hinder Innovation

Most U.S. agencies could face deep cuts in their research and development budgets over the next 5 years, the director of AAAS's R&D Budget and Policy Program told a Capitol Hill briefing. Kei Koizumi said the projected cuts, outlined in President George W. Bush's 2007 budget proposal, range from 10 to 30% for most nondefense R&D agencies.

If the Administration's proposal were approved, the R&D budget for the National Institutes of Health (NIH) would decline every year to 2010 before rebounding slightly in 2011, according to Koizumi. NIH R&D would fall 12.1% in real terms between 2006 and 2011. Pentagon R&D would fall 11.6% below the current budget, after inflation.

Koizumi presented his analysis at a 9 March briefing attended by about 130 congressional staffers and others. There are some winners in the budget, he told them. Bush's proposed "American Competitiveness Initiative" would double funding over the next decade for three agencies—the National Science Foundation (NSF), the Department of Energy's Office of Science, and the National Institute of Standards and Technology (NIST)—that support basic research programs in the physical sciences.

But Koizumi projected that even the physical sciences could take a hit overall in 2007 as cuts in three other major sponsors of the physical



Kei Koizumi

sciences—the Defense Department, NASA, and NIH—offset the requested increases at NSF, the Department of Energy, and NIST.

The annual skirmishes over R&D funding will be played out this year against an emerging bipartisan concern over innova-

tion and America’s continued technological prowess. AAAS has been active on the innovation issue, which has been the subject of a recent National Academies report and a National Summit on Competitiveness hosted by the Department of Commerce in December.

In a 9 December 2005 letter to President Bush, then-AAAS President Gilbert S. Omenn urged the White House and Congress to take steps to improve the climate for innovation in the United States. Omenn, now chairman of the AAAS Board of Directors, cited the broad consensus among business, academic, and labor leaders on the need to strengthen U.S. research as well as the country’s “chronic inability to attract enough students into fields of science, technology, engineering, and mathematics.”

In a commentary published in the *St. Louis Post-Dispatch* on 16 February as the AAAS Annual Meeting opened, Omenn and AAAS CEO Alan I. Leshner applauded the initiatives offered by Bush and Congress, where at least 11 innovation-related bills have been introduced. But, they added: “We need to pay close attention in the months ahead to possible gaps between these good intentions and actual financial commitments.”

With military operations in Iraq and Afghanistan and mounting deficits, Congress faces tough budget choices. But lawmakers can’t afford to shortchange the research enterprise or science education, Omenn and Leshner wrote. Even before the modern information revolution, they say, economists concluded that technological innovations account for up to 85% of growth in per capita income in the United States and 50% of overall economic growth.

The United States still accounts for 38 percent of the world’s R&D spending. That share has declined only slightly over the past decade, according to Koizumi. But China, among others, has been making a big push. It has risen from 17th to third in world R&D spending since 1992.

“America today remains the world leader in innovation, but our lead is slipping,” the AAAS leaders wrote. “We must inspire our children and our communities to look towards the future. We must make the investments that will invigorate research, strengthen science education and nurture innovation in all fields.”

—Earl Lane

AAAS Council Approves Statements on Censorship, Katrina

Convened during the 2006 Annual Meeting in St. Louis, the Council of the American Association for the Advancement of Science approved two resolutions:

AAAS RESOLUTION ON FREE AND OPEN EXCHANGE

WHEREAS the advance of science depends on the free and open exchange of data and findings among scientists; and

WHEREAS the capacity of members of the public and their representatives in government to understand and effectively address many of the most important policy issues of our time depends on access to the relevant science; and

WHEREAS a substantial fraction of this science is done in governmental agencies or is funded by them; and

WHEREAS censorship, intimidation, or other restriction on the freedom of scientists employed or funded by governmental organizations to communicate their unclassified scientific findings and assessments not only to each other but also to policymakers and to the public is inimical to the advance of science and its appropriate application in the policy domain;

BE IT THEREFORE RESOLVED by the Council of the American Association for the Advancement of Science that such censorship, intimidation, and restriction are inappropriate.

WE APPLAUD in this connection the recent statement of NASA Administrator Mike Griffin that NASA is “committed to open scientific and technical inquiry and dialogue with the public” and that of NOAA Director Conrad Lautenbacher Jr. encouraging NOAA scientists “to speak freely and openly.”

—Approved by the AAAS Council on 19 February 2006

RESOLUTION FROM THE MEDICAL SCIENCES SECTION

WHEREAS, Hurricane Katrina and the subsequent floods caused unprecedented disruption in research at Tulane University, Dillard University, Louisiana State University, Xavier University, and other New Orleans institutions; and

WHEREAS, the faculty and administration of these institutions are working valiantly to reestablish their research capabilities; and

WHEREAS, specific faculty with federal research grants have been unable to complete experiments and grant proposals in time for renewal applications;

BE IT THEREFORE RESOLVED by the Council that AAAS call upon the federal research agencies to grant an extraordinary extension of previous funding and renewal deadlines, as determined appropriate by the agencies after consultation with the affected institutions.

—Approved by the AAAS Council on 20 February 2006

SCIENCE DIPLOMACY

Turekian Named Chief International Officer

Vaughan Turekian, an environmental scientist who has worked at the intersection of science, diplomacy, and public policy, has been appointed the new chief international officer at AAAS.

Turekian comes to AAAS from the U.S. State Department, where he served most recently as special assistant to Paula Dobriansky, undersecretary of state for democracy and global affairs, focusing chiefly on avian flu, climate change, and sustainable development. He assumed the new post on 27 February.

In an interview, Turekian said he sees science as a way to reach out to the world. “Over the coming years,” he said, “I would hope to work closely with our membership and the international science community to chart a

path forward to help in promoting things like sustainable development, which clearly are global issues and require global action.”

A 1993 graduate of Yale University, he received his master’s degree from the University of Virginia in 1996 and his Ph.D. from Virginia in 2000. He served for 2 years as a climate expert at the National Academy of Sciences. In September 2002 he became a AAAS Diplomacy Fellow assigned to the State Department, and then was hired by State when the fellowship ended in June 2003.

As special assistant to the undersecretary of state for democracy and global affairs, Turekian worked on an array of issues—technology; climate change, environment, and energy; and health, including the recently launched International Partnership on Pandemic and Avian Influenza.

“AAAS is well-positioned to play a key role in promoting science and developing scientists who will help improve the lives of people on a global scale,” he said.